

IRB NUMBER: 11841 IRB APPROVAL DATE: 12/22/2020

You are invited to participate in research regarding socially sustainable solutions for water, carbon and infrastructure resilience in Oklahoma. This study will ask you about your perceptions and experiences with weather/climate in Oklahoma, and to characterize and evaluate problem areas and potential solutions to weather/climate challenges. This is an important long-term study and we are looking for research partners throughout the state who are willing to share their experiences and views. We are contacting you because you indicated an interest in participating. You must be at least 18 years of age and be willing to provide your contact information to participate.

If you agree to participate, you will respond to an Internet survey that should take about 30 minutes to complete.

There are no risks or benefits.

If you participate, you will receive a \$10 gift card, either mailed or emailed to you after you complete the survey.

Your participation is voluntary, and your responses will be de-identified before they are shared for research purposes or published. After removing all identifiers, we might share your data with other researchers or use it in future research without obtaining additional consent from you.

Even if you choose to participate now you may stop participating at any time and for any reason.

Data are collected via an online survey system that has its own privacy and security policies for keeping your information confidential.

If you have questions about this research, please contact:

Dr. Hank Jenkins-Smith
Institute for Public Policy Research and Analysis
University of Oklahoma
(405) 325-1720 or ippira@ou.edu

You can also contact the University of Oklahoma – Norman Campus Institutional Review Board at 405-325-8110 or irb@ou.edu with questions, concerns or complaints about your rights as a research participant, or if you don't want to talk to the researcher.

Please print this document for your records. By providing information to the researcher(s), I am agreeing to participate in this research.

consent_18: Are you a U.S. citizen 18 years of age or older?

0 - No (If no – cannot participate)

1 - Yes

contact_consent: This project focuses on problems that are different across Oklahoma and it is important that we know where you live so that we can understand the problems in your area. Are you willing to provide us with your home address so that we can identify your area?

0 - No (If no – cannot participate)

1 - Yes

consent: Do you agree to participate in this study? [two buttons]

0 - No, I do not want to participate in this study

1 - Yes, I agree to participate in this study [IF **consent** = 0, skip to new page that says: “You have indicated that you do not want to participate in this study. If you have reached this page by accident and do wish to participate in this study, please contact our technical support staff at: (405) 325- 1720 or ippira@ou.edu.”]

Thank you for participating in this study. The survey you are about to complete is different than most. We are not simply asking for opinions and preferences. We are asking for advice and guidance on how to tackle some of the biggest problems facing Oklahoma. While we will keep your identity strictly confidential, we are going to share the answers you provide with a team of scientists and policymakers across the state who are studying these problems and trying to develop creative solutions. Your responses will provide extremely valuable input into this process.

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First, we would like to get some background information about you.

age: How old are you? [verbatim; numeric]

gend: Are you male, female, or other?

0 - Female

1 - Male

2 - Other (please specify)

gend_specify: [verbatim]

hispanic: Do you consider yourself to be Hispanic, Latino, or Spanish or to have Hispanic, Latino, or Spanish origins?

0 - No

1 - Yes

race: Which of the following best describes your race?

1 - White

2 - Black or African American

3 - American Indian or Alaska Native

4 - Asian

5 - Native Hawaiian or Pacific Islander

6 - Two or more races

7 - Some other race (please specify)

race_specify: [verbatim]

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current_zip: What is the zip code at your current residence? [verbatim; numeric]

current_lngth: How many years have you lived at your current residence? [verbatim; numeric] years

adults: Including yourself, how many **adults age 18 and older** live in your current primary residence? [verbatim; numeric > 0]

children: How many **children age 17 and younger** live in your current primary residence? [verbatim; numeric]

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marital: What is your current marital status?

1 - Now married

2 - Widowed

3 - Divorced

4 - Separated

5 - Never married

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ok_lngth: How many years have you lived in Oklahoma? [verbatim; numeric] years

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home_lot: Which of the following best describes the property where you live?

- 1 - Urban
- 2 - Suburban
- 3 - Rural

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Water, land, and infrastructure affect prosperity and quality of life in many parts of Oklahoma. Scientists and decisionmakers working on this project are evaluating each of these resources and we want to know if you have any concerns about them.

We are currently thinking about three aspects when evaluating *water resources* in Oklahoma:

- Water availability: the supplies of water for various purposes, such as drinking, farming/ranching, recreation, or industrial processes
- Water quality: the suitability (cleanliness) of water for various purposes, such as drinking, farming/ranching, or recreation
- Water cost: the cost of water for various purposes, such as such as drinking, farming/ranching, or industrial processes

concern_water_availability: Do you have any concerns about *water availability* in your region of Oklahoma?

- 1 - Definitely no
- 2 - Probably no
- 3 - Unsure
- 4 - Probably yes
- 5 - Definitely yes

concern_water_quality: Do you have any concerns about *water quality* in your region of Oklahoma?

- 1 - Definitely no
- 2 - Probably no
- 3 - Unsure
- 4 - Probably yes
- 5 - Definitely yes

concern_water_cost: Do you have any concerns about the *cost of water* in your region of Oklahoma?

- 1 - Definitely no
- 2 - Probably no
- 3 - Unsure
- 4 - Probably yes
- 5 - Definitely yes

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We are currently thinking about two aspects when evaluating *land resources* in Oklahoma:

- Wildlife habitat: ecosystems that support animals and birds that people enjoy watching and hunting, such as butterflies, deer, quail, and turkey
- Soil quality: the suitability of soil for sustaining plants, animals, and livelihoods, such as productive farming and ranching

concern_land_wildlife: Do you have any concerns about *wildlife habitat* in your region of Oklahoma?

- 1 - Definitely no
- 2 - Probably no
- 3 - Unsure
- 4 - Probably yes

5 - Definitely yes

concern_land_soil: Do you have any concerns about *soil quality* in your region of Oklahoma?

- 1 - Definitely no
- 2 - Probably no
- 3 - Unsure
- 4 - Probably yes
- 5 - Definitely yes

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If you were advising the scientists and policymakers who are working on this project, which of the following would you tell them require the most attention? Please rank the items from one (most attention) to seven (least attention).
[table; randomize; rank]

rank_water_availability: Water availability

rank_water_quality: Water quality

rank_water_cost: Water cost

rank_land_wildlife: Wildlife habitat

rank_land_soil: Soil quality

rank_infra_electricity: Electricity infrastructure

rank_infra_transportation: Transportation infrastructure

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Researchers and policymakers are also studying the impact of weather and climate hazards on *water, land, and infrastructure* resources in Oklahoma. The team is focusing on forecasts/predictions at three different time scales:

- Short-range weather forecasts that focus on the next day to two weeks
- Medium-range (seasonal) weather forecasts that focus on the next two weeks to 90 days
- Long-range climate predictions that focus on the next season to decade or more

Weather hazards that occur during the short-range weather time frame include tornadoes, hail, high winds, lightning, flooding/flash flooding and snow/ice storms.

How do you rate the risk of these weather hazards to people in Oklahoma? [table; randomize]

risk_tornado: Tornadoes

- 1 - No risk
- 2 - Low risk
- 3 - Moderate risk
- 4 - High risk
- 5 - Extreme risk

risk_hail: Hail

- 1 - No risk
- 2 - Low risk
- 3 - Moderate risk
- 4 - High risk
- 5 - Extreme risk

risk_wind: High winds

- 1 - No risk
- 2 - Low risk
- 3 - Moderate risk
- 4 - High risk
- 5 - Extreme risk

risk_lightning: Lightning

- 1 - No risk
- 2 - Low risk
- 3 - Moderate risk
- 4 - High risk
- 5 - Extreme risk

risk_flood: Flooding/flash flooding

- 1 - No risk
- 2 - Low risk
- 3 - Moderate risk
- 4 - High risk
- 5 - Extreme risk

risk_snow_ice: Snow/ice storms

- 1 - No risk
- 2 - Low risk
- 3 - Moderate risk
- 4 - High risk
- 5 - Extreme risk

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Did you experience any of these weather hazards in the last 6 months? [table; randomize]

experience_tornado: Tornadoes

- 0 - No
- 1 - Yes

experience_hail: Hail

- 0 - No
- 1 - Yes

experience_wind: High winds

- 0 - No
- 1 - Yes

experience_lightning: Lightning

- 0 - No
- 1 - Yes

experience_flood: Flooding/flash flooding

- 0 - No
- 1 - Yes

experience_snow_ice: Snow/ice storms

- 0 - No
- 1 - Yes

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When you think about the next 25 years in Oklahoma, do you think the risk (frequency and severity) of these weather hazards will increase, decrease, or stay about the same? [table; randomize]

future_tornado: Tornadoes

- 1 - Significantly decrease
- 2 - Decrease
- 3 - Stay about the same
- 4 - Increase
- 5 - Significantly increase

future_hail: Hail

- 1 - Significantly decrease
- 2 - Decrease
- 3 - Stay about the same
- 4 - Increase
- 5 - Significantly increase

future_wind: High winds

- 1 - Significantly decrease
- 2 - Decrease
- 3 - Stay about the same
- 4 - Increase
- 5 - Significantly increase

future_lightning: Lightning

- 1 - Significantly decrease
- 2 - Decrease
- 3 - Stay about the same
- 4 - Increase
- 5 - Significantly increase

future_flood: Flooding/flash flooding

- 1 - Significantly decrease
- 2 - Decrease
- 3 - Stay about the same
- 4 - Increase
- 5 - Significantly increase

future_snow_ice: Snow/ice storms

- 1 - Significantly decrease
- 2 - Decrease
- 3 - Stay about the same
- 4 - Increase
- 5 - Significantly increase

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Hazards that occur during the medium-range (seasonal) weather time frame include:

- Flash drought: periods of intense drought that arise quickly and last for a few weeks
- Pluvials: periods of excessive precipitation/rain that last for a few weeks
- Heat waves: periods of excessively hot temperatures that last for a few weeks
- Cold spells: periods of excessively cold temperatures that last for a few weeks

How do you rate the risk of these seasonal hazards to people in Oklahoma? [table; randomize]

risk_flash_drought: Flash drought

- 1 - No risk
- 2 - Low risk
- 3 - Moderate risk
- 4 - High risk

5 - Extreme risk

risk_pluvial: Pluvials (periods of excessive precipitation/rain)

- 1 - No risk
- 2 - Low risk
- 3 - Moderate risk
- 4 - High risk
- 5 - Extreme risk

risk_heat_wave: Heat waves

- 1 - No risk
- 2 - Low risk
- 3 - Moderate risk
- 4 - High risk
- 5 - Extreme risk

risk_cold_spell: Cold spells

- 1 - No risk
- 2 - Low risk
- 3 - Moderate risk
- 4 - High risk
- 5 - Extreme risk

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Did you experience any of these seasonal hazards in the last 6 months? [table; randomize]

experience_flash_drought: Flash drought

- 0 - No
- 1 - Yes

experience_pluvial: Pluvials (periods of excessive precipitation/rain)

- 0 - No
- 1 - Yes

experience_heat_wave: Heat waves

- 0 - No
- 1 - Yes

experience_cold_spell: Cold spells

- 0 - No
- 1 - Yes

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When you think about the next 25 years in Oklahoma, do you think the risk (frequency and severity) of these seasonal hazards will increase, decrease, or stay about the same? [table; randomize]

future_flash_drought: Flash drought

- 1 - Significantly decrease
- 2 - Decrease
- 3 - Stay about the same
- 4 - Increase
- 5 - Significantly increase

future_pluvial: Pluvials (periods of excessive precipitation/rain)

- 1 - Significantly decrease
- 2 - Decrease
- 3 - Stay about the same
- 4 - Increase
- 5 - Significantly increase

future_heat_wave: Heat waves

- 1 - Significantly decrease
- 2 - Decrease
- 3 - Stay about the same
- 4 - Increase
- 5 - Significantly increase

future_cold_spell: Cold spells

- 1 - Significantly decrease
- 2 - Decrease
- 3 - Stay about the same
- 4 - Increase
- 5 - Significantly increase

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There are multiple hazards that occur during the long-range climate time frame, but one of the most common in Oklahoma is long-term drought, which can last for several months.

risk_long_drought: How do you rate the risk of long-term drought to people in Oklahoma?

- 1 - No risk
- 2 - Low risk
- 3 - Moderate risk
- 4 - High risk
- 5 - Extreme risk

experience_long_drought: Did you experience long-term drought in the last 6 months?

- 0 - No
- 1 - Yes

future_long_drought: When you think about the next 25 years in Oklahoma, do you think the risk (frequency and severity) of long-term drought will increase, decrease, or stay about the same?

- 1 - Significantly decrease
- 2 - Decrease
- 3 - Stay about the same
- 4 - Increase
- 5 - Significantly increase

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In addition to weather and climate hazards, Oklahoma also experiences other natural hazards, including wildfires and earthquakes.

How do you rate the risk of these hazards to people in Oklahoma? [table; randomize]

risk_wildfire: Wildfires

- 1 - No risk
- 2 - Low risk
- 3 - Moderate risk
- 4 - High risk

5 - Extreme risk

risk_earthquake: Earthquakes

- 1 - No risk
- 2 - Low risk
- 3 - Moderate risk
- 4 - High risk
- 5 - Extreme risk

Did you experience any of these hazards in the last 6 months? [table; randomize]

experience_wildfire: Wildfires

- 0 - No
- 1 - Yes

experience_earthquake: Earthquakes

- 0 - No
- 1 - Yes

When you think about the next 25 years in Oklahoma, do you think the risk (frequency and severity) of these hazards will increase, decrease, or stay about the same? [table; randomize]

future_wildfire: Wildfires

- 1 - Significantly decrease
- 2 - Decrease
- 3 - Stay about the same
- 4 - Increase
- 5 - Significantly increase

future_earthquake: Earthquakes

- 1 - Significantly decrease
- 2 - Decrease
- 3 - Stay about the same
- 4 - Increase
- 5 - Significantly increase

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Now we have some questions about three types of *infrastructure* in Oklahoma:

- Water infrastructure (for example: drinking water pipelines, water towers, treatment plants, stormwater systems)
- Energy infrastructure (for example: electrical grids, power plants, natural gas pipelines, fuel storage facilities)
- Transportation infrastructure (for example: roads, bridges, highways, railways)

concern_infra_water_new: Do you have any concerns about *water infrastructure* in your region of Oklahoma?

- 1 - Definitely no
- 2 - Probably no
- 3 - Unsure
- 4 - Probably yes
- 5 - Definitely yes

concern_infra_energy_new: Do you have any concerns about *energy infrastructure* in your region of Oklahoma?

- 1 - Definitely no
- 2 - Probably no
- 3 - Unsure

- 4 - Probably yes
- 5 - Definitely yes

concern_infra_transportation_new: Do you have any concerns about *transportation infrastructure* in your region of Oklahoma?

- 1 - Definitely no
- 2 - Probably no
- 3 - Unsure
- 4 - Probably yes
- 5 - Definitely yes

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How vulnerable do you believe the following types of infrastructure in your area are to the impacts of natural hazards? [table; randomize]

vuln_water: Water infrastructure (for example: drinking water pipelines, water towers, treatment plants, stormwater systems)

- 1 - Not at all vulnerable
- 2 - Slightly vulnerable
- 3 - Moderately vulnerable
- 4 - Very vulnerable
- 5 - Extremely vulnerable

vuln_energy: Energy infrastructure (for example: electrical grids, power plants, natural gas pipelines, fuel storage facilities)

- 1 - Not at all vulnerable
- 2 - Slightly vulnerable
- 3 - Moderately vulnerable
- 4 - Very vulnerable
- 5 - Extremely vulnerable

vatn_transp: Transportation infrastructure (for example: roads, bridges, highways, railways)

- 1 - Not at all vulnerable
- 2 - Slightly vulnerable
- 3 - Moderately vulnerable
- 4 - Very vulnerable
- 5 - Extremely vulnerable

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Imagine government officials in your area are allocating funding to better prepare the following types of infrastructure for natural hazards. Which type of infrastructure would you recommend they prioritize? [table; randomize]

fund_water: Water infrastructure (for example: drinking water pipelines, water towers, treatment plants, stormwater systems)

- 1 - Not a priority
- 2 - Low priority
- 3 - Moderate priority
- 4 - High priority
- 5 - Extremely high priority

fund_energy: Energy infrastructure (for example: electrical grids, power plants, natural gas pipelines, fuel storage facilities)

- 1 - Not a priority

- 2 - Low priority
- 3 - Moderate priority
- 4 - High priority
- 5 - Extremely high priority

fund_transp: Transportation infrastructure (for example: roads, bridges, highways, railways)

- 1 - Not a priority
- 2 - Low priority
- 3 - Moderate priority
- 4 - High priority
- 5 - Extremely high priority

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The next few questions focus on transportation infrastructure.

Have you personally experienced any of the following issues with transportation infrastructure in your area? Please select all that apply.

transp_poor_conditions: Poor road conditions (e.g., potholes, cracks)

transp_congestion: Traffic congestion

transp_no_sidewalks: Lack of sidewalks or pedestrian paths

transp_no_bike_lanes: Lack of bike lanes or unsafe conditions for cyclists

transp_inadequate_public_transport: Inadequate public transportation options (e.g., limited bus routes, infrequent service)

transp_unreliable_public_transport: Public transportation delays or unreliability

transp_disability_access: Poor accessibility for individuals with disabilities

transp_unsafe_intersections: Unsafe intersections or crosswalks

transp_no_parking: Lack of parking availability

transp_no_lighting: Insufficient lighting on roads or sidewalks

transp_poor_signage: Poor signage or confusing road signs

transp_reduced_visibility: Reduced visibility

transp_no_ev_charging: Limited or no access to electric vehicle charging stations

transp_safety_concerns: Road safety concerns (e.g., speeding, reckless driving)

transp_poor_bridge_maintenance: Inadequate maintenance of bridges and overpasses

transp_flooding: Flooding or water drainage issues on roads

transp_oth_spec: Other (please specify) [verbatim]

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transp_trip_time: Think about the time it typically takes you to complete a one-way trip for activities like commuting to work or running errands. On average, how long does it take you to complete a one-way trip?

- 1 - Less than 15 minutes
- 2 - 15-30 minutes
- 3 - 30-45 minutes
- 4 - 45-60 minutes
- 5 - More than 60 minutes

transp_trip_count: On average, how many one-way trips do you typically make per day?

- 1 - 0 to 1 trips
- 2 - 2 to 3 trips
- 3 - 4 to 5 trips
- 4 - 6 to 9 trips
- 5 - 10 or more trips

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transp_comm_mode: What is the primary mode of transportation you use for regular commuting?

- 1 - Car, truck, or van (as a driver)
- 2 - Car, truck, or van (as a passenger)
- 3 - Public bus or transit
- 4 - Bicycle
- 5 - Walk
- 6 - Taxi or ride-hailing service (e.g., Uber, Lyft)
- 7 - Motorcycle
- 8 - Telecommuting/work from home
- 9 - Other (please specify)

transp_comm_mode_oth_spec: [verbatim]

transp_comm_miles: How far do you travel for regular commuting trips (for example, the one-way distance in miles from home to work)?

- 1 - Less than 5 miles
- 2 - 5–10 miles
- 3 - 11–20 miles
- 4 - 21–30 miles
- 5 - 31–50 miles
- 6 - 51–60 miles
- 7 - More than 60 miles

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transp_fuel_type: What is the fuel type of the vehicle most frequently used by your household?

- 1 - Gasoline
- 2 - Diesel
- 3 - Hybrid (Gasoline/Electric)
- 4 - Plug-in Hybrid (Gasoline/Electric with plug-in charging)
- 5 - Electric (Battery-powered)
- 6 - Other (please specify)

transp_fuel_type_oth_spec: [verbatim]

transp_fuel_miles: To the best of your knowledge, approximately how many miles has this vehicle been driven in the past 12 months by all drivers?

- 1 - Less than 5,000 miles
- 2 - 5,000–10,000 miles
- 3 - 10,001–20,000 miles
- 4 - 20,001–30,000 miles
- 5 - 30,001–50,000 miles
- 6 - 50,001–75,000 miles
- 7 - 75,001–100,000 miles
- 8 - More than 100,000 miles

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Natural hazards such as heavy rainfall, flash flooding, and wildfires have severely impacted Oklahoma's transportation infrastructure. Flooding often leads to road closures, isolating communities and disrupting traffic, while aging infrastructure and inadequate drainage systems worsen the problem. Wildfires also damage roads and make travel unsafe, further straining the state's transportation networks.

con_transp_imp: Do you have any concerns about the impact of natural hazards on transportation infrastructure in your area?

- 1 - Definitely no
- 2 - Probably no

- 3 - Unsure
- 4 - Probably yes
- 5 - Definitely yes

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[if **con_transp_imp** = 4 or 5]

con_transp_imp_desc: Can you briefly describe what concerns you *most* about the impact of natural hazards on transportation infrastructure in your area? [verbatim]

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transp_trust: How much trust do you have in the agencies that operate and maintain the transportation infrastructure in your area?

- 1 - No trust
- 2 - Low trust
- 3 - Moderate trust
- 4 - High trust
- 5 - Complete trust

transp_conf: How confident are you that new programs can be implemented to meaningfully reduce the vulnerability of transportation infrastructure in your area to natural hazards?

- 1 - Not at all confident
- 2 - Slightly confident
- 3 - Moderately confident
- 4 - Very confident
- 5 - Extremely confident

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State officials in Oklahoma are considering a new program aimed at reducing the vulnerability of transportation infrastructure to natural hazards. Although the program is expensive, estimates suggest it would reduce the risk of severe transportation disruptions (e.g., road closures and delays) by [**transp_reduc**: 10%, 40%, 70%] across the state.

transp_vote: Imagine that government officials were asking you to vote on the program. If it would not cost you anything, would you vote for a program that to reduce the vulnerability of transportation infrastructure to natural hazards?

- 1 - Definitely vote *against* the program
- 2 - Probably vote *against* the program
- 3 - Not sure
- 4 - Probably vote *for* the program
- 5 - Definitely vote *for* the program

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[ask if **transp_vote** = 4 or 5]

transp_wtp: Would you vote for the transportation improvement program if it were to increase your annual state tax by [randomize **transp_bid**: \$1:100] each year for the next 10 years?

- 0 - No
- 1 - Yes
- 2 - Not sure

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Do you agree or disagree with the following statements? [table; randomize]

human_progress: People worry too much about human progress harming the environment.

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

worry_future: People worry too much about the future of the environment and not enough about prices and jobs today.

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

modern_science: Modern science will solve our environmental problems with little change to our way of life.

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

econ_growth: In order to protect the environment, Oklahoma needs economic growth.

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

harm_environ: Economic growth always harms the environment.

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

modern_life: Almost everything we do in modern life harms the environment.

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

science_harm: Overall modern science does more harm than good.

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

feelings_faith: People believe too often in science and not enough in feelings and faith.

- 1 - Strongly disagree
- 2 - Disagree

- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

people_solve: Regardless of the issue, people can come together and solve whatever the problem is.

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

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Solving problems as a group or community can be contentious and technically complex, so getting information you can trust is important. How much do you trust information from the following groups and organizations? [table; randomize]

trust_university: University scientists

- 1 - No trust
- 2 - Low trust
- 3 - Moderate trust
- 4 - High trust
- 5 - Complete trust

trust_nonprofit: Nonprofit research organizations

- 1 - No trust
- 2 - Low trust
- 3 - Moderate trust
- 4 - High trust
- 5 - Complete trust

trust_policy: State and local policymakers and elected officials

- 1 - No trust
- 2 - Low trust
- 3 - Moderate trust
- 4 - High trust
- 5 - Complete trust

trust_agencies: State and local agencies that regulate water, land, and infrastructure resources

- 1 - No trust
- 2 - Low trust
- 3 - Moderate trust
- 4 - High trust
- 5 - Complete trust

trust_private: Private companies whose operations use water, land, and infrastructure resources

- 1 - No trust
- 2 - Low trust
- 3 - Moderate trust
- 4 - High trust
- 5 - Complete trust

trust_tribe: Tribal leaders and governing bodies

- 1 - No trust
- 2 - Low trust
- 3 - Moderate trust

- 4 - High trust
- 5 - Complete trust

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Next, we have some more detailed questions about energy, including electricity and fuel, in Oklahoma.

pay_util: To begin, can you tell us if you have had difficulty paying for your utility bills in the past 12 months?

- 1 - Never
- 2 - Rarely
- 3 - Multiple occasions
- 4 - Often
- 5 - Always

forgo_util: Have you had to forgo basic household expenses like food or medical care to afford your energy bill in the past 12 months?

- 1 - Never
- 2 - Rarely
- 3 - Multiple occasions
- 4 - Often
- 5 - Always

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What factors are most important to you, personally, when selecting a fuel source or power supply? Please rank the items from one (most important) to five (least important). [table; randomize, something else on bottom; rank]

rank_fuel_safety: Safety

rank_fuel_cost: Low cost

rank_fuel_environ: Environmental protection

rank_fuel_conv: Convenience

rank_fuel_reli: Reliability

rank_fuel_other: Other (please specify)

rank_fuel_other_spec: [verbatim]

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The next set of questions focuses on decisions to shift from one primary energy system or fuel source to another, a process often referred to by scientists and policymakers as an energy transition.

How important do you think it is for each of these stakeholders to be involved in discussions about an energy transition in Oklahoma? [table; randomize]

trans_sci: Scientists and specialists

- 1 - Not important
- 2 - Slightly important
- 3 - Moderately important
- 4 - Very important
- 5 - Extremely important

trans_ent: Entrepreneurs and business owners

- 1 - Not important
- 2 - Slightly important
- 3 - Moderately important
- 4 - Very important
- 5 - Extremely important

trans_pol: Politicians

- 1 - Not important
- 2 - Slightly important
- 3 - Moderately important
- 4 - Very important
- 5 - Extremely important

trans_com_pro: Residents of the community where the energy is *produced*

- 1 - Not important
- 2 - Slightly important
- 3 - Moderately important
- 4 - Very important
- 5 - Extremely important

trans_com_con: Residents of the community where the energy is *consumed*

- 1 - Not important
- 2 - Slightly important
- 3 - Moderately important
- 4 - Very important
- 5 - Extremely important

trans_com_sto: Residents of the community where the energy is *stored*

- 1 - Not important
- 2 - Slightly important
- 3 - Moderately important
- 4 - Very important
- 5 - Extremely important

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How much you know about the following energy sources and technologies. [table; randomize]

know_hydro: Hydrogen energy

- 1 - Nothing at all
- 2 - A little
- 3 - A moderate amount
- 4 - A lot
- 5 - A great deal

know_geo: Geothermal energy

- 1 - Nothing at all
- 2 - A little
- 3 - A moderate amount
- 4 - A lot
- 5 - A great deal

know_wind: Wind energy

- 1 - Nothing at all
- 2 - A little
- 3 - A moderate amount
- 4 - A lot
- 5 - A great deal

know_solar: Solar energy

- 1 - Nothing at all

- 2 - A little
- 3 - A moderate amount
- 4 - A lot
- 5 - A great deal

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energy_news_trust: How much trust do you have in news and information about energy sources and technologies in Oklahoma?

- 1 - No trust
- 2 - Low trust
- 3 - Moderate trust
- 4 - High trust
- 5 - Complete trust

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Which of the following energy sources do you feel are safe to use in or near your home? Select all that apply. [randomize]

safe_gas: Natural gas

safe_oil: Oil

safe_prop: Propane

safe_wind: Wind

safe_solar: Solar

safe_hydro: Hydrogen

safe_geo: Geothermal

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Imagine a renewable energy plant is going to be built near your area. What is the minimum distance you would feel comfortable having between the plant and your home? [randomize]

dist_solar: Solar farm (minimum recommended safe distance is 2 miles away)

- 1 - 1 mile
- 2 - 1 to 5 miles
- 3 - More than 5 miles
- 4 - I would oppose regardless of distance
- 5 - I don't know

dist_wind: Wind farm (minimum recommended safe distance is at least 1 mile away)

- 1 - 1 mile
- 2 - 1 to 5 miles
- 3 - More than 5 miles
- 4 - I would oppose regardless of distance
- 5 - I don't know

dist_geo: Geothermal plant (minimum recommended safe distance is 0.2 miles away)

- 1 - 1 mile
- 2 - 1 to 5 miles
- 3 - More than 5 miles
- 4 - I would oppose regardless of distance
- 5 - I don't know

dist_bio: Biofuel plant (minimum recommended safe distance is less than 1 mile away)

- 1 - 1 mile
- 2 - 1 to 5 miles

- 3 - More than 5 miles
- 4 - I would oppose regardless of distance
- 5 - I don't know

dist_hydro: Hydrogen plant (minimum recommended safe distance is 0.13 miles away)

- 1 - 1 mile
- 2 - 1 to 5 miles
- 3 - More than 5 miles
- 4 - I would oppose regardless of distance
- 5 - I don't know

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To what extent do you agree that each of the following should be a motivation or driver for adopting renewable energy? [table; randomize]

motiv_cost: Lower cost

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

motiv_fed: Federal incentives/programs

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

motiv_inn: Being perceived as innovative

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

motiv_carb: Reduce carbon footprint

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

motiv_rev: Generate revenue

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

motiv_self: Being energy self-reliant/independent

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

motiv_jobs: Create jobs and employment

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

motiv_emm: Lower carbon emissions and pollution

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

motiv_comp: Compatibility with current land uses

- 1 - Strongly disagree
- 2 - Disagree
- 3 - Unsure
- 4 - Agree
- 5 - Strongly agree

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As you may know, the issue of global climate change has been the subject of public discussion over the last few years.

glbcc: In your view, are greenhouse gases, such as those resulting from the combustion of coal, oil, natural gas, and other materials, causing average global temperatures to rise?

- 0 - No
- 1 - Yes

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glbcc_cert: On a scale from zero to ten, where zero means *not at all certain* and ten means *completely certain*, how certain are you that greenhouse gases are/are not ["are" if **glbcc** = 1; "are not" if **glbcc** = 0] causing average global temperatures to rise?

- 0 - Not at all certain
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 - Completely certain

glbcc_risk: On a scale from zero to ten, where zero means *no risk* and ten means *extreme risk*, how much risk do you think global warming poses for people and the environment?

- 0 - No risk
- 1
- 2
- 3
- 4

- 5
- 6
- 7
- 8
- 9
- 10 - Extreme risk

glbwrn_ok: In your view, is global warming causing the weather patterns in Oklahoma to change?
0 - No
1 - Yes
2 - Don't know

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party: Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or what?
1 - Democratic party
2 - Republican party (or GOP)
3 - Independent
4 - Other party (Please specify)
party_spec: [verbatim]

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[If **party** = 1 or 2]

iden: Would you call yourself a strong [Democrat if **party** = 1; Republican if **party** = 2] or a not very strong [Democrat if **party** = 1; Republican if **party** = 2]?
2 - Strong
1 - Not very strong

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[If **party** = 3 or 4]

lean: Do you think of yourself as closer to the Republican or Democratic Party?
1 - Democratic Party
2 - Republican Party
3 - Neither

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ideol: On a scale of political ideology, individuals can be arranged from strongly liberal to strongly conservative. Which of the following categories best describes your views?
1 - Strongly liberal
2 - Liberal
3 - Slightly liberal
4 - Middle of the road
5 - Slightly conservative
6 - Conservative
7 - Strongly conservative

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education: What is the highest level of education you have COMPLETED?
1 - Less than High School
2 - High School / GED

- 3 - Vocational or Technical Training
- 4 - Some College — NO degree
- 5 - 2-year College / Associate's Degree
- 6 - Bachelor's Degree
- 7 - Master's degree
- 8 - PhD / JD (Law) / MD

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employment: Which one of the following BEST describes your current employment status?

- 1 - Not working and not seeking work
- 2 - Not working but seeking work
- 3 - Working part-time
- 4 - Working full-time
- 5 - Student
- 6 - Retired
- 7 - Unable to work because of a disability

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[If **employment** = 3 or 4]

industry: Which of the following BEST reflects the kind of business or industry in which you are employed?

- 1 - Agriculture
- 2 - Mining
- 3 - Construction
- 4 - Manufacturing
- 5 - Transportation, Communications or Public Utility
- 6 - Wholesale or Retail Trade
- 7 - Restaurants
- 8 - Legal Services
- 9 - Health and Medical Services
- 10 - Education
- 11 - Business & Accounting Services
- 12 - Engineering & Technical Services
- 13 - Personal Services or Recreational Services
- 14 - Finance, Insurance, or Real Estate
- 15 - Government
- 16 - Other

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Do you currently or have you ever worked in a business or industry that relates to any of the following natural resources in Oklahoma? [Please indicate all that apply] [randomize]

wrk_natres_oil: Oil/Petroleum

wrk_natres_gas: Natural Gas

wrk_natres_solar: Solar

wrk_natres_wind: Wind

wrk_natres_water: Water

wrk_natres_soil: Soil/Plants

wrk_natres_other: Other (please specify)

wrk_natres_other_specify: [verbatim]

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inc: Was the estimated annual income for your household in 2023:

- 1 - Less than \$50,000 [skip to **inc50**]
- 2 - At least \$50,000 but less than \$100,000 [skip to **inc100**]
- 3 - At least \$100,000 but less than \$150,000 [skip to **inc150**]
- 4 - \$150,000 or more [skip to **inc200**]

income_people: Including yourself, how many people contributed to the annual income for your household in 2023? [verbatim; require numeric > 0]

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inc50: Was the estimated annual income for your household in 2023:

- 1 - Less than \$10,000
- 2 - \$10,000 to less than \$20,000
- 3 - \$20,000 to less than \$30,000
- 4 - \$30,000 to less than \$40,000
- 5 - \$40,000 to less than \$50,000

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inc100: Was the estimated annual income for your household in 2023:

- 6 - \$50,000 to less than \$60,000
- 7 - \$60,000 to less than \$70,000
- 8 - \$70,000 to less than \$80,000
- 9 - \$80,000 to less than \$90,000
- 10 - \$90,000 to less than \$100,000

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inc150: Was the estimated annual income for your household in 2023:

- 11 - \$100,000 to less than \$110,000
- 12 - \$110,000 to less than \$120,000
- 13 - \$120,000 to less than \$130,000
- 14 - \$130,000 to less than \$140,000
- 15 - \$140,000 to less than \$150,000

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inc200: Was the estimated annual income for your household in 2023:

- 16 - \$150,000 to less than \$160,000
- 17 - \$160,000 to less than \$170,000
- 18 - \$170,000 to less than \$180,000
- 19 - \$180,000 to less than \$190,000
- 20 - \$190,000 to less than \$200,000
- 21 - \$200,000 or more

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Thank you very much for completing this survey. Your responses will help our team of scientists and policymakers identify and solve some of the biggest problems facing Oklahoma. As a token of our appreciation, you will be receiving a \$10 gift card by mail or email in the next few weeks.

giftcard_selection: Please select the type of gift card you would most like to receive from the four options shown below. You will be able to change your selection each time you complete the survey. Please note, if you do not select from the choices below, we will select a \$10 Walmart gift card for you.

- 1 - \$10 Walmart gift card

4 - \$10 Amazon e-card (will be sent via email)

Please verify that our records are correct: [verbatim; autofill with prior data if available; require response]

confirm_fname: First name: [verbatim]

confirm_lname: Last name: [verbatim]

confirm_address: Address: [verbatim]

confirm_city: City: [verbatim]

state: Oklahoma

confirm_zip: Zip: [verbatim; 5-digit numeric]

confirm_county: County: [drop down list of counties]

confirm_phone: Phone: [verbatim; numeric]

confirm_email: Email: [verbatim]

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Thank you very much for your participation in the Oklahoma Weather, Society and Government Survey! We greatly appreciate your time and attention. As a token of our appreciation, you will be receiving a \$10 gift card by mail or email within the next few weeks.